

R E M A R K S

Item 16 of the current Office Action dated June 2, 2003 characterizes the action as final, in violation of accepted Patent Office standards, MPEP 706.07(a) (“Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p)), and the finality of the current Office Action cannot be sustained.

Item 16 alleges that the new ground for rejection was necessitated by the applicant's amendment. The applicant traverses this proposition.

The amendment, dated March 10, 2003:

1) narrowed claim 1 by incorporating a limitation from dependent claim 4 and narrowed claim 7 by incorporating a limitation from dependent claim 10;

2) canceled claims 4 and 10; and

3) argued persuasively that the anticipation rejection of claims 4 and 10 lacked validity, and that the same argument applies to claims 1 and 7 as amended.

The current Office Action introduces a new ground of rejection by replacing the anticipation rejection with an obviousness rejection. Moreover, an additional rejection is introduced based on a newly found reference.

Since the same subject matter introduced by amendment into independent

claims 1 and 7 was already present in originally-filed claims 4 and 10, which were also rejected as anticipated, the new ground of rejection introduced by the Examiner was not necessitated by the applicant's amendment. To the contrary, the new grounds of rejection were necessitated by the persuasiveness of the remarks in the March 10, 2003 amendment.

Reconsideration and withdrawal of the finality of the current rejection is respectfully requested, to avoid the need for the applicant to take further measures within the Patent Office.

The current Office Action has been reviewed and carefully considered.

Claims 14-16 have been added. Claims 1-16 are pending in this application, of which claims 1 and 7 are the independent claims. Claims 1, 2, 7, 8 and 13 have been amended. Reconsideration of the claims, as amended and in view of the following remarks, is respectfully requested.

Claims 1, 3, 5 and 7 were objected to for reciting “said variety” when referring to an earlier recitation of “variety of blocks.” Item 1 of the Office Action states, with regard to the claim language, that “While it can be understood . . . it should be explicitly stated to make the claims clearer. . . Appropriate correction is required.”

“Some latitude in the manner of expression and the aptness of terms should be permitted even though the claim language is not as precise as the examiner might desire. Examiners are encouraged to suggest claim language to applicants to improve the clarity or precision of the language used, but should not reject claims or insist on their

own preferences if other modes of expression selected by applicants satisfy the statutory requirement.” MPEP 2173.02

The applicant’s use of the expression “said variety” in the claims not only satisfies statutory requirements, but fully comports with correct use of English and with proper patent claim drafting. Although reciting “said variety of objects” repeatedly throughout the claims would not be improper, the extra verbiage would not add to the precision or readability of the claims. It would be improper to maintain the objection. Reconsideration and withdrawal of the objection is respectfully requested.

Claims 1-3, 5-9 and 11-13 were rejected under 35 U.S.C. 112, second paragraph, as indefinite for lack of antecedent basis in the independent claims for “the limit value” and “the counters of the blocks,” and for inconsistent language in claims 2 and 8. Appropriate correction has been made to the claims, which, as amended, are believed to overcome any basis for rejection under Section 112.

Claims 1-3, 5-9 and 11-13 stand rejected under 35 USC 103(a) as allegedly unpatentable over PCT Publication No. WO 95/10083 to Assar et al. (“Assar”).

Advantageously, the present invention allows the reclaiming of free space to occur independently of events executed to efficiently regulate uniform block wear levels. When data requiring less update is shifted to a block of high wear level, subsequent update of the data at the new location is not inhibited (page 7, lines 25-29: “To avoid the block 22 being erased many times more”). The present invention recognizes that, over time, as the limit value is raised successively, any difference in wear levels will smooth out. Consequently, it is not necessary to reclaim free space

every time there is an increase in the limit value against which wear counts are compared. To the contrary, free space can be reclaimed at the appropriate optimum time.

Assar, by contrast, inhibits further update of the shifted data at the new location. At the moment all blocks exceed the limit value, there is no alternative but to immediately reclaim free space, regardless of the system impact with regard to, for example, power requirements (Assar, page 3, lines 1-3; page 8, line 36 to page 9, line 8).

Claim 1 as amended recites “wherein the blocks from said variety have an associated counter for counting the number of mutations in the block concerned, and a limit value is increased when a predetermined number, which is at least the majority, of the counters of the blocks from said variety exceed the limit value, said determining being based on said limit value and a value of the counter of the first block (22).”

Item 6 of the Office Action concedes that the reference does not disclose the above-shown, underlined limitation of claim 1, but alleges that increasing the limit value in lieu of clearing the counters would have been “an obvious matter of design choice.” However, Assar clears the erase inhibit flags concurrently with clearing the counters. What would have been the motivation for increasing the field size for the wearout leveling count and for the limit value? Not only is more storage required, but more resources are consumed in comparing the two quantities due to their larger size. Redesigning Assar to resemble the invention as recited in claim 1 would not have been obvious for at least the above-stated reasons.

Claim 7 recites the same above-quoted limitation, and is likewise deemed to be non-obvious over Assar.

Claim 1-3, 5-9 and 11-13 stand rejected under 35 U.S.C. 103(a) as unpatentable over Assar in view of U.S. Patent No. 6,000,006 to Bruce et al. ("Bruce").

Item 7 of the Office Action suggests that lines 55-59 of column 2 of Bruce offer motivation for reconfiguring Assar to feature the invention as recited in claims 1 and 7. The passage states "While these flash memories systems are useful, a more effective flash memory system is desired . . ." The flash memories described above that passage, however, are different than that of Assar. Line 31, for example, states "Periodically clearing the erase counters is undesirable because there is no way to determine the total number of erase/write cycles to a given block . . . their erase counters are periodically cleared to zero regardless of usage." Assar, by contrast does not clear the erase counters until all blocks have the identical amount of usage (page 20, line 36 to page 21, line 2). Accordingly, Bruce fails to provide motivation to modify Assar to feature the limitations of the present invention as recited in claims 1 and 7. At least for this reason, claim 1 is not rendered obvious by the cited references.

As to the remaining claims, they each depend from one of the base claims and are likewise deemed to be obvious for at least the same reasons.

Claims 14-16 have been added to further emphasize aspects of the invention. Support for the new claims is found in the specification (page 7, lines 25-29; page 8, lines 3-4).

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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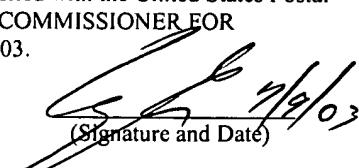
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